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EXAMINER

PATEL, GAUTAM

ART UNIT PAPER NUMBER

2627

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/505,270	Applicant(s) VAN DER KALL ET AL.	
	Examiner Gautam R. Patel	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-7 and 9-14 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment/Arguments:

1. This is in response to amendment filed on 1/21/08.

Claim Rejections - 35 U.S.C. § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 9-13 are rejected under 35 U.S.C. § 102(b) as being anticipated by Odegawa et al., US. Patent 5,987,044 (hereafter Odegawa).

As to claim 2, Odegawa discloses the invention as claimed [see Figs. 2-6] including measuring one parameter, comprising the steps of:

3. The aforementioned claim 2, recites the following steps, inter alia, disclosed in Odegawa:
applying electrical power to said semi-conductor laser device;

measuring a light intensity (temperature measurement indirectly measures intensity of light) of a laser beam generated by said semi-conductor laser device;

controlling said electrical power such that said light intensity remains constant;

measuring at least one electrical parameter indicative of the work point [(I_b) op] of said semi-conductor laser; and

determining said operational temperature [T_L] of said semi-conductor laser device on the basis of a predetermined relationship between said work point and said operational temperature [col. 3, lines 31-63; col. 4, line 38 to col. 5, line 25, col. 6, line 54 to col. 7, line 9; fig. 4 & 6].

4. The aforementioned claim 3, recites the following steps, inter alia, disclosed in Odegawa:
taking temperature reducing steps [col. 3, lines 45-63] if the measured value of said at least one electrical parameter indicates that the operational temperature of the laser device has reached a predetermined critical temperature [col. 6, lines 31-64].

5. The aforementioned claim 4, recites the following steps, inter alia, disclosed in Odegawa:

Measuring a plurality of electrical parameters [time, current & temperature] indicative of the work point of said semi-conductor laser device and wherein said temperature reducing steps are taken if at least one of said plurality of electrical parameters indicates that the operational temperature of the laser device has reached a predetermined critical temperature [T_H] [col. 3, lines 31-63; col. 4, line 38 to col. 5, line 25, col. 6, line 54 to col. 7, line 9; fig. 4 & 6].

6. The aforementioned claim 5, recites the following steps, inter alia, disclosed in Odegawa:

the at least one electrical parameter is compared with a predetermined parameter level [col. 3, lines 31-63; col. 4, line 38 to col. 5, line 25, col. 6, line 54 to col. 7, line 9; fig. 4 & 6].

7. The aforementioned claim 6, recites the following steps, inter alia, disclosed in Odegawa:

said electrical parameter is measured at a certain known temperature [room temperature 25 degree], this measured value being taken as zero value, wherein said electrical parameter is measured during operation of the disc drive to yield an actual value, and wherein the difference between the actual value of said electrical parameter and said zero value is compared with a predetermined threshold [max temperature and associated max currents I_b and I_d ; see figs. 4 & 6] [col. 3, lines 31-63; col. 4, line 38 to col. 5, line 25, col. 6, line 54 to col. 7, line 9; fig. 4 & 6].

8. The aforementioned claim 7, recites the following steps, inter alia, disclosed in Odegawa:

operating a cooling device or a ventilator, or the step of reducing a clock frequency, or the step of reducing a rotational speed of a motor of said disc drive [col. 3, lines 31-63; col. 4, line 38 to col. 5, line 25, col. 6, line 54 to col. 7, line 9; fig. 4 & 6]. NOTE: reduction in pulse size reduces the clock frequency thus satisfying the claim limitation [col. 3, lines 31-63; col. 4, line 38 to col. 5, line 25, col. 6, line 54 to col. 7, line 9; fig. 4 & 6].

9. The aforementioned claim 9, recites the following steps, inter alia, disclosed in Odegawa:

a disc drive motor (inherently present when disc is rotating) for rotating an optical disc;
a laser device for generating a laser beam for scanning the optical disc;

a control unit controlling the disc drive motor and the laser device; wherein the control unit is designed to monitor at least one electrical parameter indicative of the work point of a semi-conductor laser of said laser device, and takes laser device temperature affecting steps in dependence on said at least one electrical parameter [col. 3, lines 31-63; col. 4, line 38 to col. 5, line 25, col. 6, line 54 to col. 7, line 9; fig. 4 & 6].

10. The aforementioned claim 10, recites the following steps, inter alia, disclosed in Odegawa:

the control unit controls the rotational speed of said disc drive motor in dependence on said at least one electrical parameter [col. 3, lines 31-63; col. 4, line 38 to col. 5, line 25, col. 6, line 54 to col. 7, line 9; fig. 4 & 6]. NOTE: speed of the motor is inherently controlled based on the outer or inner periphery of the disc and also based on focus and tracking error signals.

11. The aforementioned claim 11, recites the following steps, inter alia, disclosed in Odegawa:

a light intensity sensor coupled to an input of the control unit, said light intensity sensor receiving at least a portion of the laser beam generated by the semi-conductor laser light intensity sensor generating a measuring signal representative of the light intensity of said laser beam, the control unit being designed to control said semi-conductor laser such as to maintain a constant laser beam intensity [col. 3, lines 31-63; col. 4, line 38 to col. 5, line 25, col. 6, line 54 to col. 7, line 9; fig. 4 & 6]. NOTE: Here the Applicants are merely claiming how APC works this aspect as such is not patentable.

12. The aforementioned claim 12, recites the following steps, inter alia, disclosed in Odegawa:

said at least one electrical parameter comprises an output voltage of the control unit [col. 3, lines 31-63; col. 4, line 38 to col. 5, line 25, col. 6, line 54 to col. 7, line 9; fig. 4 & 6]. NOTE current passing through the resistor produces the voltage.

13. The aforementioned claim 13, recites the following steps, inter alia, disclosed in Odegawa:

said at least one electrical parameter comprises the difference between an actual value of an output voltage of the control unit and a zero value of said output voltage of the control unit measured at a certain known temperature [col. 3, lines 31-63; col. 4, line 38 to col. 5, line 25, col. 6, line 54 to col. 7, line 9; fig. 4 & 6].

14. The aforementioned claim 14, recites the following steps, inter alia, disclosed in Odegawa:

the control unit has a plurality of outputs each providing a corresponding control signal [see fig. 5A; col. 5, line 55 to col. 6, line 53] to a corresponding one of said semiconductor lasers and wherein the control unit monitors a single signal indicative of a work point of only one of said semiconductor lasers and takes laser device temperature affecting steps in on said single threshold voltage indicating signal [col. 3, lines 31-63; col. 4, line 38 to col. 5, line 25, col. 6, line 54 to col. 7, line 9; fig. 4 & 6].

Allowable Subject Matter

15. Claim 8 is objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

NOTE: Claim 8 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a method for driving a laser which includes step of “reducing the speed when said electrical parameter reaches a first predetermined parameter level indicative of said semi-conductor laser device having reached a predetermined critical temperature, and wherein the rotational speed of said motor of said disc drive is increased when said electrical parameter reaches a second predetermined parameter level indicative of said semi-conductor laser device having reached a normal temperature”. It is noted that the closest prior art, Odegawa et al. (US 5986044) shows a similar apparatus which discloses all the steps.

However Odegawa et al. fails to disclose a increasing or decreasing the speed based on the temperature of the laser device.

16. Applicant's arguments with respect to claims 2-14 have been considered but are moot in view of the new grounds of rejection.

Other prior art cited

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Burbidge et al. (US. Patent 6101200).
- b. Shoji t al. (US. Patent 4835781)
- c. Maeda (US. patent 5168503)

18. Applicant's amendment necessitated the new grounds of rejection presented in this office action. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Contact information

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is 571-272-7625. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2600) where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Dwayne Bost, can be reached on (571) 272-7023.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Electronic Business Center whose telephone number is 866-217-9197 or the USPTO contact Center telephone number is (800) PTO-9199.



**GAUTAM R. PATEL
PRIMARY PATENT EXAMINER**

Gautam R. Patel
Primary Examiner
Group Art Unit 2627

February 5, 2008